# WATER RESOURCES

## Purpose

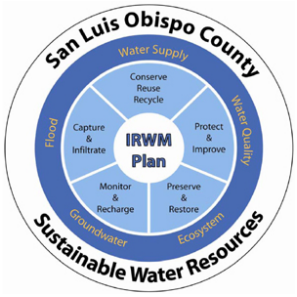
The County recognizes water as a valuable and scarce resource; it is essential for the county's environmental, social, and economic well being, and for the public health. This chapter connects water supply and land use planning to ensure a clean, sustainable water supply.

## Introduction

Water resources are of vital importance to the entire county. Clean, reliable, and safe drinking water is essential to public health and the economic well-being of the region.

The County of San Luis Obispo is at a critical juncture, as water demand approaches sustainable supplies. Some areas of the county are experiencing groundwater problems such as seawater intrusion and declining water quality due in part to a lack of available surface water supplies and consistent recharge. This will have significant effects for people and the environment over time.

Reduced water supplies and compromised water quality affect the health of watersheds, and immediate action is needed to protect these valuable resources. Water conservation efforts are already under way in some areas of the county. These efforts represent one of the many solutions to the challenge of managing limited resources. (Refer to **Appendix 10** for more information regarding the county's surface and groundwater resources.)




***Integrated Regional Water Management Plan***

*A Strategic Plan for Sustainable Water Resources to Meet Human and Environmental Needs in San Luis Obispo County*

## Relationship to Other Elements, Plans and Programs

This chapter links water supply and land use planning, and it integrates the County's Integrated Regional Water Management (IRWM) Plan with the General Plan. A primary goal of the IRWM Plan is to integrate water supply management with management of water for other purposes such as ecosystem health and flood control. The quality objectives in the IRWM are consistent with the intent of Safe Drinking Water Act goals to protect drinking water "from source to tap." They are also consistent with broader Clean Water Act goals for clean, fishable, and swimmable waters.

In addition to the IRWM Plan, this chapter is closely related to the Strategic Growth principles adopted by the Board of Supervisors that call for directing most growth to cities and communities while conserving agricultural resources and rural character in the rural areas. In order to do so, safe, reliable, and sustainable water supplies will need to be provided in urban areas. At the same time, groundwater supplies will need to be protected for agriculture in accordance with the Agriculture Element.

*San Luis Obispo County obtains nearly 80% of its water supply from groundwater. Only 2% of the county's supply comes from imported water and the remaining 17% of water supply is surface waters. The County has 30 groundwater basins.*

This chapter establishes a comprehensive water policy for the unincorporated portion of the county. The goals, policies and implementation strategies in this chapter are consistent with the goals, policies and implementation strategies of other chapters of the COSE. The water resources policies deal with issues such as protecting groundwater for agriculture, limiting the effects of new development on groundwater basins, protecting water quality and quantity for environmental purposes, and conserving the water resources we currently use. Policies in Biological Resources, Open Space and Energy chapters also address these issues.

## Major Issues

The following issues provide the framework for the goals, policies, and implementation strategies in this chapter. The issues deal with water supply, groundwater monitoring and management, water quality, conservation, water resource management, and flood control. The following is a summary of challenges facing the county.

### *Water Supply*

- The conflicting demands on our limited supply of water mean we have difficult policy choices to guide future water use.
- Changing land uses in the county mean changes in water use and availability. Securing adequate water supply for all beneficial uses, especially agricultural land uses, is a priority of the General Plan.
- Strategic growth principles call for redirecting development from areas that rely on groundwater to urban areas served by surface water in order to protect groundwater for agriculture.
- There is a need to secure water supplies to protect environmental resources.

### *Groundwater Monitoring and Management*

- Protecting the quantity and quality of groundwater resources is critical to a reliable water supply and is challenging under California water law.
- Groundwater overdraft is a significant and growing problem for the county.
- Limited availability of groundwater data hinders groundwater management efforts.

### *Water Quality*

- An increase in the amount of impervious surfaces from development has led to adverse water quality impacts from urban runoff.
- Increased water usage within the county threatens water quality, as evidenced by seawater intrusion and increasing concentrations of contaminants in many areas of the county.

### *Water Conservation*

- Conserving the county's limited water supply is one method to reduce the strain on local water sources.

*Groundwater overdraft develops when long-term groundwater extraction exceeds aquifer recharge, producing declining trends in aquifer storage. Overdraft is usually evident by, declines in surface-water levels and stream flow, reduction or elimination of vegetation, land subsidence, and seawater intrusion. (Zekster 2005)*

***We will recognize success when…***

- *Sustainable water supplies are achieved for development, agriculture and environmental needs.*
- *Critical water supply and water system problems (Levels of Severity II and III) will be reduced (to Level of Severity I) by 2020.*
- *There are no further approvals of new lots or increased allowable development densities or intensities in groundwater basins experiencing critical supply problems (Levels of Severity II or III).*
- *Reclaimed water will comprise 10 percent of total water use by 2020.*
- *Urban and rural water uses do not compete with agricultural water supplies.*
- *Levels of pollutants are reduced in groundwater, reservoirs, creeks, estuaries, and beaches.*
- *Per capita water use is reduced by 20 percent by 2020.*
- *Water resources are managed using a watershed approach in collaboration with cities, water purveyors, resource conservation districts and landowners.*

- Water conservation programs in the county vary by community and are difficult to coordinate, as the programs are run by individual water purveyors such as cities, special districts and private companies.

### *Water Resources Management*

- The success of managing water in the future will depend on ensuring that there is adequate funding to maintain and/or develop needed infrastructure, such as pipelines, treatment plants, and desalination facililties.
- More water resource data is needed to make informed and defensible resource management decisions.
- Water management programs (e.g., groundwater management plans) are needed to adequately manage water resources, but they require additional funding.

### *Flood Management*

- Solving flood management problems requires an integrated and broad approach.
- Existing flood control regulations and standards do not always provide the appropriate level of flood protection for every situation and often have a narrow perspective (i.e., only drainage or flood control).

## Goals, Policies, and Implementation Strategies

The intent of the following goals, policies and implementation strategies is to:

a. recognize water as a valuable and scarce resource;

b. take early actions to avoid critical situations;

c. achieve a sustainable water supply;

d. protect water quality and natural communities, and;

e. control flooding.

Water is essential for the county's environmental, social, and economic well being, and for the public health.

| TABLE WR-1<br>GOALS FOR WATER RESOURCES | |
|---|---|
| Goal WR 1 | The County will have a reliable and secure regional water supply (IRWM). |
| Goal WR 2 | The County will manage groundwater resources to ensure sustainable supplies for all beneficial uses. |
| Goal WR 3 | Excellent water quality will be maintained for the health of people and natural communities. |
| Goal WR 4 | Per capita potable water use in the county will decline by 20 percent by 2020. |
| Goal WR 5 | The best possible tools and methods available will be used to manage water resources. |
| Goal WR 6 | Damage to life, structures, and natural resources from floods will be avoided. |

## GOAL 1 THE COUNTY WILL HAVE A RELIABLE AND SECURE REGIONAL WATER SUPPLY (IRWM).

*Policy WR 1.1 Protect water supplies*

Continue to coordinate with water suppliers and managers to identify water management strategies to protect and secure new water supplies. (Refer to **Figure WR-1** Surface Waters.)

◇ ***Implementation Strategy WR 1.1.1 Prepare Water Master Plan***

Prepare a region-wide Master Water Plan that will:

a. Analyze supply and demand by evaluating the potential for new supplies;

b. Investigate whether drought contingency plans or other emergency supplies are available to water purveyors;

c. Evaluate a water demand monitoring program in coordination with the County Planning Department's Resource Management System to monitor municipal, industrial, agricultural, recreational, and environmental demand on an ongoing basis;

d. Develop a GIS application identifying major land uses and quantifying water demands based on acreage, land use, and consumptive use statistics; and

e. Identify any deficiencies and recommend projects, policies, and programs to address those deficiencies. (IRWM)

### *Policy WR 1.2 Conserve Water Resources*

Water conservation is acknowledged to be the primary method to serve the county's increasing population. Water conservation programs should be implemented countywide before more expensive and environmentally costly forms of new water are secured.

◇ ***Implementation Strategy WR 1.2.1 Revise Resource Management System***

Revise the Resource Management System Annual Resource Summary Report to collect and report on water usage and trends, water rates and conservation programs (Also refer to Implementation Strategy WR 4.2.1).

### *Policy WR 1.3 New Water Supply*

Development of new water supplies should focus on efficient use of our existing resources. Use of reclaimed water, interagency cooperative projects, and groundwater recharge projects should be considered prior to using imported sources of water or seawater desalination.

***Reclaimed water**, sometimes called recycled water, is wastewater that has been treated to remove solids and certain impurities. After treatment, is may be used for to recharge the aquifer, often irrigation, dust control, and fire suppression.*

### *Policy WR 1.4 Use reclaimed water*

The County will be a leader in the use of reclaimed water. Support expanding the use of reclaimed water to make up 5% of total water use by 2015 and 10% of total water use by 2020. (IRWM)

◇ ***Implementation Strategy WR 1.4.1 Reclaimed water: monitor technology***

Monitor and explore new technologies that lower the cost of advanced tertiary treatment. (IRWM)

◇ ***Implementation Strategy WR 1.4.2 Reclaimed water: identify funding sources***

Search for new funding sources for advanced tertiary treatment projects. (IRWM)

◇ ***Implementation Strategy WR 1.4.3 Reclaimed water: identify partners***
Identify potential partners for advanced tertiary treatment projects (i.e., agriculture, park fields, etc.). (IRWM)

◇ ***Implementation Strategy WR 1.4.4 Reclaimed water: groundwater recharge***
Explore opportunities for groundwater recharge with reclaimed water. Opportunities include but are not limited to recharge through use of reclaimed water for irrigation, dust control, and fire suppression. (IRWM)

*Policy WR 1.5 Interagency projects*

Help implement interagency projects, including emergency inter-ties between systems, jointly developed facilities, water exchanges, and other methods of enhancing reliability through cooperative efforts. (IRWM)

◇ ***Implementation Strategy WR 1.5.1 Sponsor interagency collaboration***
Sponsor discussions between agencies to help facilitate exchange of ideas, and to assess possible cooperative projects.

*Policy WR 1.6 Water dependent species*

Protect water sources for water-dependent species and the continuity of riparian communities.

◇ ***Implementation Strategy WR 1.6.1 Evaluate ecosytem water needs***
As part of the Master Water Plan, evaluate ecosystem water needs and monitoring strategies to understand the environmental needs for water in each watershed.

*Policy WR 1.7 Agricultural operations*

Groundwater management strategies will give priority to agricultural operations. Protect agricultural water supplies from competition by incompatible development through land use controls. (GM9 and AGP11)

◇ ***Implementation Strategy WR 1.7.1 Protect agricultural water supplies***

Consider adopting land use standards, such as growth management ordinance limits for non-agriculturally-related development on certain rural areas, larger minimum parcel sizes in certain rural areas, and merger of substandard rural parcels, in order to protect agricultural water supplies from competing land uses.

### *Policy WR 1.8 Use of surface water projects*

Water from surface water projects (e.g. Lopez Lake, Lake Nacimiento) will only be used to serve development within urban and village reserve lines and will not be used to serve development in rural areas.

### *Policy WR 1.9 Discourage new water systems*

Enable expansion of public services by community services districts and County service areas to serve contiguous development when water is available. Discourage the formation of new water and sewer systems serving urban development at the fringe and outside of urban or village reserve lines or services lines. Discourage the formation of new mutual water companies in groundwater basins with Resource Management System Levels of Severity I, II or III.

***Water Wheeling*** *occurs when one agency conveys water through another agency's facility. California Water Code requires that wheeling must not harm any other legal user of water.*

### *Policy WR 1.10 Water wheeling*

When water wheeling is proposed to serve new development, demonstrate that the conveyance facility has an adequate unused capacity in accordance with the California Water Code.

### *Policy WR 1.11 Reduce RMS alert levels*

The County will work with local agencies to reduce Resource Management System alert levels for water supply and water systems from recommended or certified Levels of Severity II or III to Level of Severity I or better by 2020.

◇ ***Implementation Strategy WR 1.11.1 Prioritization of resource capacity studies***

Give highest priority to conducting resource capacity studies for groundwater basins with a Level of Severity designation.

FIGURE WR-1
SURFACE WATER RESOURCES IN THE COUNTY

*Lopez Lake*

*"We can't create water or increase the supply. We can only hold back and redistribute what there is. If rainfall is inadequate, then streams will be inadequate, lakes will be few and sometimes saline, underground water will be slow to renew itself when it has been pumped down, the air will be very dry, and surface evaporation from lakes and reservoirs will be extreme." Wallace Stegner*

*Policy WR 1.12 Impacts of new development*

Accurately assess and mitigate the impacts of new development on water supply. (GM1) At a minimum, comply with the provisions of Senate Bills 610 and 221.

◇ ***Implementation Strategy WR 1.12.1 Water quality data collection***

Continue and expand programs to integrate water quality data collection and monitoring with land use programs, such as the Resource Management System.

◇ ***Implementation Strategy WR 1.12.2 Require water supply assessments***

Require applications for land divisions, which would increase density or intensity in groundwater basins with recommended or certified Levels of Severity II or III for water supply or water systems and are not in adjudication, to include a water supply assessment (WSA) prepared by the applicable urban water supplier (as defined by California Water Code Section 10617). The WSA should:

a. Determine whether the total projected water supplies for the project during the next 20 years will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural uses.

b. If water supplies will be insufficient, the WSA should include the water purveyor's plans for acquiring additional water supplies.

*Policy WR 1.13 Density increases in rural areas*

Do not approve General Plan amendments or land divisions that increase the density or intensity of non-agricultural uses in rural areas that have a recommended or certified Level of Severity II or III for water supply until a Level of Severity I or better is reached, unless there is an overriding public need.

*Policy WR 1.14 Avoid net increase in water use*

Avoid a net increase in non-agricultural water use in groundwater basins that are certified as Level of Severity II or III for water supply. Place limitations on further land divisions in these areas

until plans are in place and funded to ensure that the safe yield will not be exceeded. (GM5 revised)

*Policy WR 1.15 Desalination opportunities*

Support the expansion of desalination opportunities (IRWM). Desalination projects will balance water supply needs with potential effects on biological resources, especially marine resources. Desalination projects will be powered by non-fossil fuel sources where feasible.

***Desalination** refers to any of several processes that remove excess salt and other minerals from water often for conversion to fresh water suitable for human consumption or irrigation.*

◇ ***Implementation Strategy WR 1.14.1 Desalination: monitor technology***
Monitor and explore new technologies that lower the cost of desalination. (IRWM)

◇ ***Implementation Strategy WR 1.14.2 Desalination: identify funding***
Search for new funding sources for desalination projects. (IRWM)

◇ ***Implementation Strategy WR 1.14.3 Desalination: identify partners***
Continue to identify potential partners for desalination projects. (IRWM)

## GROUNDWATER MONITORING AND MANAGEMENT

**GOAL 2** THE COUNTY WILL MANAGE GROUNDWATER RESOURCES TO ENSURE SUSTAINABLE SUPPLIES FOR ALL BENEFICIAL USES.

*Policy WR 2.1 Groundwater quality assessments*

Prepare groundwater quality assessments, including recommended monitoring, and management measures.

◇ ***Implementation Strategy WR 2.1.1 Groundwater monitoring: secure funding***
Continue efforts to prioritize and secure funding for groundwater monitoring and management.

*Lake Nacimiento*

*"I encourage each and every Californian to look at ways to reduce their water usage whenever possible."*

*Governor Schwarzenegger (September 30, 2008, in press release "Gov. Schwarzenegger Signs Legislation to Improve Water Supply Reliability and Conservation")*

◇ ***Implementation Strategy WR 2.1.2 Consider countywide groundwater ordinance***

Consider adoption of a countywide groundwater ordinance to govern groundwater in areas of the county not currently under adjudication.

◇ ***Implementation Strategy WR 2.1.3 Prepare groundwater management plans***

Continue to develop groundwater management plans in conjunction with overlying users in the development of management plans. Provide periodic updates to the Board of Supervisors every five years or less.

### *Policy WR 2.2 Groundwater basin reporting programs*

Support monitoring and reporting programs for groundwater basins in the region. (Refer to Figure WR-2 Groundwater Basins.)

◇ ***Implementation Strategy WR 2.2.1 Collaborate for groundwater data collection***

The County will cooperate with local entities and use local analysis and data to the maximum extent possible to collect and assess groundwater. (GM3, WPC6)

◇ ***Implementation Strategy WR 2.2.2 Improve well permit data collection***

Improve data obtained from well permit applications regarding location, depth, yield, use, flow direction, and water levels.

◇ ***Implementation Strategy WR 2.2.3 Pursue data collection from all groundwater wells***

Secure right of access to all new key wells together with retaining voluntary access to existing wells having useful histories to ensure that the County's investment in these records is protected. The County should seek to obtain unlimited permission from each of the well owners for releasing or publishing groundwater data. (GM2)

◇ ***Implementation Strategy WR 2.2.4 Groundwater data collection from water purveyors***

Require, to the extent feasible, all water purveyors with five or more connections to report monthly pumping data to the Department of Planning and Building on an annual basis for use in the Resource Management System.

◇ ***Implementation Strategy WR 2.2.5 Groundwater data collection for new development***
Condition discretionary land use permits for new, non-agricultural uses in groundwater basins with a recommended or certified Level of Severity I, II, or III to monitor and report water use to the Department of Planning and Building on an annual basis for use in the Resource Management System.

*Policy WR 2.3 Well permits*
Require all well permits to be consistent with the adopted groundwater management plans.

◇ ***Implementation Strategy WR2.3.1 Revise well permit procedures***
Revise well permit procedures to address adopted groundwater management plan objectives

*Policy WR 2.4 Groundwater recharge*
Promote groundwater recharge with high-quality water.

*Policy WR 2.5 Groundwater banking programs*
Encourage groundwater-banking programs.

◇ ***Implementation Strategy WR 2.5.1 Evaluate groundwater banking***
Consider in-county opportunities for groundwater banking in the development of the Master Water Plan.

*Santa Margarita Lake*

*"People have a fundamental yearning for great bodies of water. But the very movement of the people toward the water can also destroy the water."*

*-Christopher Alexander, Sara Ishikawa, and Murray Silverstein, A Pattern Language: Towns, Buildings, Construction (Oxford, 1977)*

## FIGURE WR-2
## GROUNDWATER BASINS

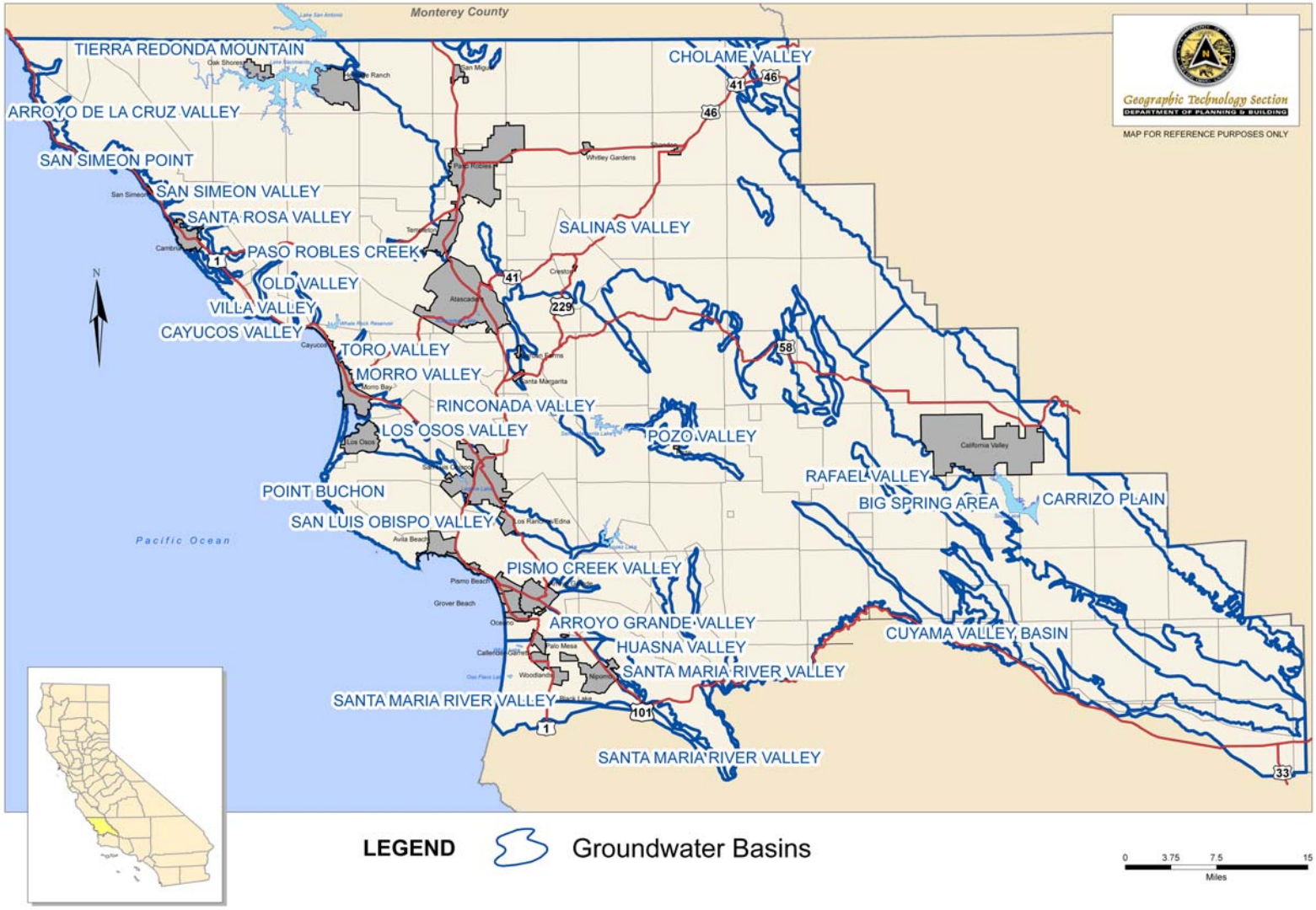


FIGURE WR-3
GROUNDWATER BASINS – DETAILED PERSPECTIVE

## WATER QUALITY

**GOAL 3** EXCELLENT WATER QUALITY WILL BE MAINTAINED FOR THE HEALTH OF PEOPLE AND NATURAL COMMUNITIES.

*Policy WR 3.1 Prevent water pollution*

Take actions to prevent water pollution, consistent with federal and state water policies and standards, including but not limited to the federal Clean Water Act, Safe Drinking Water Act, and National Pollutant Discharge Elimination System (NPDES).

◇ ***Implementation Strategy WR 3.1.1 Support TMDL's***

Support the development and implementation of Total Maximum Daily Loads (TMDLs) by the Regional Water Quality Control Board and State Water Resources Board.

◇ ***Implementation Strategy WR 3.1.2 Employ pollution prevention in County operations***

Employ pollution prevention techniques in all County operations and maintenance activities consistent with the Good Housekeeping Best Management Practices outlined in the County's Stormwater Management Program.

◇ ***Implementation Strategy WR 3.1.3 Minimize construction-related impacts to water quality***

Minimize construction and post-construction impacts of development through implementation of the County's Stormwater Management Program and Stormwater Pollution Prevention and Discharge Control Ordinance in compliance with Phase II of the National Pollutant Discharge Elimination System (NPDES).

◇ ***Implementation Strategy WR 3.1.4 Continue water quality-related public education***

Continue to work collaboratively throughout the county to promote water quality and pollution prevention through education programs as identified in the County's Stormwater Management Program (SWMP).

*A **Best Management Practice** (BMP) is a technique, process, activity, or structure used or developed to reduce the pollutant content of a stormwater discharge. (County SWMP)*

*Policy WR 3.2 Protect watersheds*

Protect watersheds, groundwater and aquifer recharge areas, and natural drainage systems from potential adverse impacts of development projects. (GM1)

◇ ***Implementation Strategy WR 3.2.1 Minimize runoff from new development***

Ensure that public and private developments subject to discretionary review are designed to minimize runoff from such sources as homes, golf courses, swimming pools, and roadway maintenance.

*Policy WR 3.3 Improve groundwater quality*

Protect and improve groundwater quality from point and non-point source pollution, including nitrate contamination; MTBE and other industrial, agricultural, and commercial sources of contamination; naturally occurring mineralization, boron, radionuclide, geothermal contamination; and seawater intrusion and salts.

◇ ***Implementation Strategy WR 3.3.1 Prioritization and preparation of groundwater management plans***

Give high priority to preparing and implementing groundwater management plans for basins with evidence of seawater intrusion or other water quality problems.

◇ ***Implementation Strategy WR 3.3.2 Maintain database of onsite wastewater systems***

Maintain an electronic database and map database of septic and onsite wastewater treatment systems.

◇ ***Implementation Strategy WR 3.3.3 Abatement of failing septic systems***

Pursue the abatement of failing septic systems that are a health and safety hazard and prohibit septic systems in areas where impairment of groundwater quality would take place. (WPC1)

*Policy WR 3.4 Water quality restoration*

Pursue opportunities to participate in programs or projects for water quality restoration and remediation with agencies and organizations such as the Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), and

*Whale Rock Reservoir*

Resource Conservation Districts (RCDs) in areas where water quality is impaired.

### *Policy WR 3.5 Support Resource Conservation Districts*

Continue support of and partnerships with Resource Conservation Districts to encourage education and technical assistance regarding erosion and sediment control in agricultural and other land use practices. (Also refer to Policy AG 8 in the Agriculture Element.)

### *Policy WR 3.6 Prevent pollution of water sources*

The County will collaborate with private and nonprofit land managers, Resource Conservation Districts, recreation providers, and other stakeholders to prevent pollution or contamination of potable water sources, such as Lake Nacimiento and Lopez Lake. The County will also coordinate with the Nacitone Watershed Plan.

- ***Implementation Strategy WR 3.6.1 Protect drinking water sources from grading***
  Develop specific grading and erosion control regulations near potable water sources. Prepare a public review draft Land use Ordinance amendment by the end of 2012.

- ***Implementation Strategy WR 3.6.2 Abate recreation-related pollution of drinking water sources***
  Pursue abatement of pollution resulting from recreational activities, particularly oil and domestic sewage from boats and recreation vehicles. (WPC4)

- ***Implementation Strategy WR 3.6.3 Control Quagga mussels and similar invasive species***
  Enact measures to control Quagga mussels and other invasive species through measures such as inspections, access limitations, and education in coordination with the California Department of Fish and Game and the Monterey County Water Resources Agency (for Lake Nacimiento.

## WATER CONSERVATION

**GOAL 4** PER CAPITA POTABLE WATER USE IN THE COUNTY WILL DECLINE BY 20 PERCENT BY 2020.

*Policy WR 4.1 Reduce water use*

Employ water conservation programs to achieve a 20% reduction in per capita water use by 2020. (Also refer to Policy AG 20 in the Agricultural Element.)

- ***Implementation Strategy WR 4.1.1 Identify baseline per capita water use***
  Identify, within six months of adoption of this Conservation and Open Space Element, per capita water use at the time of adoption of this Element as the baseline, using sub-regional or community data where available.

- ***Implementation Strategy WR 4.1.2 Adopt countywide water conservation ordinance***
  Develop and adopt a countywide water conservation ordinance that includes water efficiency and conservation standards for new development and the retrofit-upon-sale of existing residential and commercial properties. Prepare a public review draft Land Use Ordinance amendment by the end of 2011.

- ***Implementation Strategy WR 4.1.3 Evaluate a countywide water conservation program***
  Evaluate the feasibility of creating a consortium, Joint Powers Authority, Memorandum of Understanding, or other formal partnership with all water purveyors in the county to provide a comprehensive and consistent countywide water conservation program that includes education, outreach, and financial incentives.

- ***Implementation Strategy WR 4.1.4 Expand public education programs for water conservation***
  The County and all other water purveyors in the county will collaborate with local nonprofit and educational organizations such as the Partners in Water Conservation to expand water conservation education programs countywide.

*Policy WR 4.2 Water pricing structures*

Support water-pricing structures to encourage conservation by individual water users (WRM8) and will seek to expand the use of conservation rate structures in areas with Levels of Severity II and III for water supply.

◇ ***Implementation Strategy WR 4.2.1 Incorporate water pricing into RMS***

Revise the Resource Management System annual report starting with the 2010 report to focus on water rates and water use and to identify disincentives to non-conservation water rate structures.

*Policy WR 4.3 Water conservation*

The County will be a leader in water conservation efforts.

◇ ***Implementation Strategy WR 4.3.1 Promote water conservation demonstration projects***

Invite university and community collaboration on water conservation demonstration projects at County facilities such as the replacement of the lawn at the County Courthouse with a native landscape and expansion of water conservation landscaping at regional park facilities.

◇ ***Implementation Strategy WR 4.3.2 Assess and monitor County water use***

Assess and monitor water use by County operations, buildings, and facilities on annual basis.

◇ ***Implementation Strategy WR 4.3.3 Reduce water use in County operations***

Reduce exterior and interior use of water in County-owned, operated, or financed facilities through efficient technologies, design and management practices, and other conservation efforts.

◇ ***Implementation Strategy WR 4.3.4 Provide water conservation education for County employees***

Implement employee education programs to reduce water use.

*Policy WR 4.4 Reuse wastewater*

The County will work with wastewater system operators to identify and implement programs for reuse of treated wastewater,

particularly in landscaping, irrigation, parks, and public facilities. (WPC5)

◇ ***Implementation Strategy WR 4.4.1 Evaluate impact of self-regenerating water softeners***
Evaluate the potential impact of self-regenerating water softeners on the County's ability to effectively treat and use reclaimed water. Amend ordinances as needed.

*Policy WR 4.5 Water for recharge*
Promote the use of supplemental water such as reclaimed sewage effluent and water from existing impoundments to prevent overdraft of groundwater. Consider new ways to recharge underground basins and to expand the use of reclaimed water. Encourage the eventual abandonment of ocean outfalls. (GM8 and 10)

*Policy WR 4.6 Graywater*
Encourage the use of graywater systems, rainwater catchments, and other water reuse methods in new development and renovation projects, consistent with state and local water quality regulations.

◇ ***Implementation Strategy WR 4.6.1 Develop and adopt a graywater ordinance and program***
Develop and adopt a graywater ordinance and program, including public education, to facilitate the reuse of domestic wastewater for onsite irrigation and other water conservation measures as appropriate. (IRWM)

*Policy WR 4.7 Low Impact development*
Require Low Impact Development (LID) practices in all discretionary and land division projects to reduce, treat, infiltrate, and manage urban runoff.

◇ ***Implementation Strategy WR 4.7.1 Develop and implement a Low Impact Development (LID) Ordinance***
Develop and implement a Low Impact Development (LID) Ordinance to provide clear and consistent guidance in the permit application process.

***Low Impact Development (LID)*** *is an innovative stormwater management approach with a basic principle to design the built environment to remain a functioning part of an ecosystem rather than exist apart from it. LID's goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. See also: http://www.lid-stormwater.net/ and http://lowimpactdevelopment.org/*

***Graywater*** *is untreated wastewater that has not encountered toilet waste. Graywater includes wastewater from bathtubs, showers, bathroom sinks, and clothes washing machines. It does not include wastewater from kitchen sinks, photo lab sinks, dishwashers, or laundry water from soiled diapers.*

*A **watershed** is the total area above a given point on a watercourse that contributes water to its flow; the entire region drained by a waterway or watercourse that drains to a lake or reservoir.*

*Policy WR 4.8 Efficient irrigation*

Support efforts of the resource conservation districts, California Polytechnic State University (CalPoly), the University of California Cooperative Extension, and others to research, develop, and implement more efficient irrigation techniques. (GM11and AGP10)

## WATER RESOURCE MANAGEMENT

**GOAL 5**

THE BEST POSSIBLE TOOLS AND METHODS AVAILABLE WILL BE USED TO MANAGE WATER RESOURCES.

*Policy WR 5.1 Watershed approach*

The County will consider watersheds and groundwater basins in its approach to managing water resources in order to include ecological values and economic factors in water resources development. (WRM1 revised)

◇ ***Implementation Strategy WR 5.1.1 Support watershed management plans***

Support development and implementation of watershed management plans for all key watersheds in the county in collaboration with resource conservation districts, water purveyors, cities, and landowners. Watershed management plans should incorporate the information contained in the County's Source Water Assessments (SWAs) and Watershed Sanitary Surveys (WSSs), and should also include:.

a. Water quality monitoring data;

b. Activities and sources of contamination;

c. Watershed control and management practices; and

d. An evaluation of the system's ability to meet surface water treatment requirements and recommendations for corrective actions. (IRWM)

◇ ***Implementation Strategy WR 5.1.2 Secure funding for watershed management***

Seek and secure funding to manage water resources on a watershed basis.

◇ ***Implementation Strategy WR 5.1.3 Promote the coordination of watershed protection efforts***
Promote the coordination of watershed protection efforts and open space and agricultural land preservation planning, consistent with Agriculture Element policies AGP 15 and 16.

*Policy WR 5.2 Climate change*
The County will consider ongoing research on long-term changes in climate and precipitation patterns in the county and region in its approach to managing water resources.

*Policy WR 5.3 Cooperative water planning*
Continue to support cooperative, interregional water planning efforts such as the Integrated Regional Water Management Plan and the Water Master Plan.

*Policy WR 5.4 Interagency projects*
Implement interagency projects including emergency inter-ties between systems, jointly developed facilities, water exchanges (i.e., water wheeling), and other methods of enhancing reliability through cooperative efforts over the development of new supplies. (IRWM).

*Policy WR 5.5 Coordinate water management plans*
Coordinate water resource management plans with other conservation planning efforts, such as those related to open space, parkland, and agricultural preservation.

*Policy WR 5.6 Cumulative impacts to watersheds*
Identify mitigation strategies or programs at the watershed, groundwater basin level, or a portion thereof that address cumulative impacts within watersheds, groundwater basins or in portions of watersheds or groundwater basins in coordination with cities and watershed managers.

*Policy WR 5.7 Dams and reservoirs*
Dams and reservoirs should: 1) avoid geologically hazardous locations 2) mitigate adverse affects on any downstream beaches 3) preserve archaeological resources 4) mitigate adverse affects on fish and wildlife species, 5) use quarry materials from areas

subject to inundation, where feasible, and 5) consider favorable storage evaporation characteristics. (WRM2)

## FLOOD CONTROL

**GOAL 6**

DAMAGE TO LIFE, STRUCTURES, AND NATURAL RESOURCES FROM FLOODS WILL BE AVOIDED.

The County's Safety Element, Land Use Ordinance, and Hazard Mitigation Plan discuss the potential risks to life, structures, and natural resources from flooding, and identify goals, policies, programs, and standards to minimize risks. Please consult those documents to help evaluate the potential flooding risks or impacts of development, and its consistency with County plans and programs.

The County Flood Control and Water Conservation District, through the County Public Works Department, has the authority to construct and maintain flood control improvements on major drainage facilities located throughout the county for the purpose of protecting life and property from flood hazards.

The County strictly enforces flood hazard regulations in order to reduce flood damage in poorly drained areas and other areas prone to flooding, such as portions of Los Osos, Avila Valley, Santa Margarita, Cambria, and Oceano. The flood hazard regulations also enable the County to identify high-risk areas and participate in the federal flood insurance program.

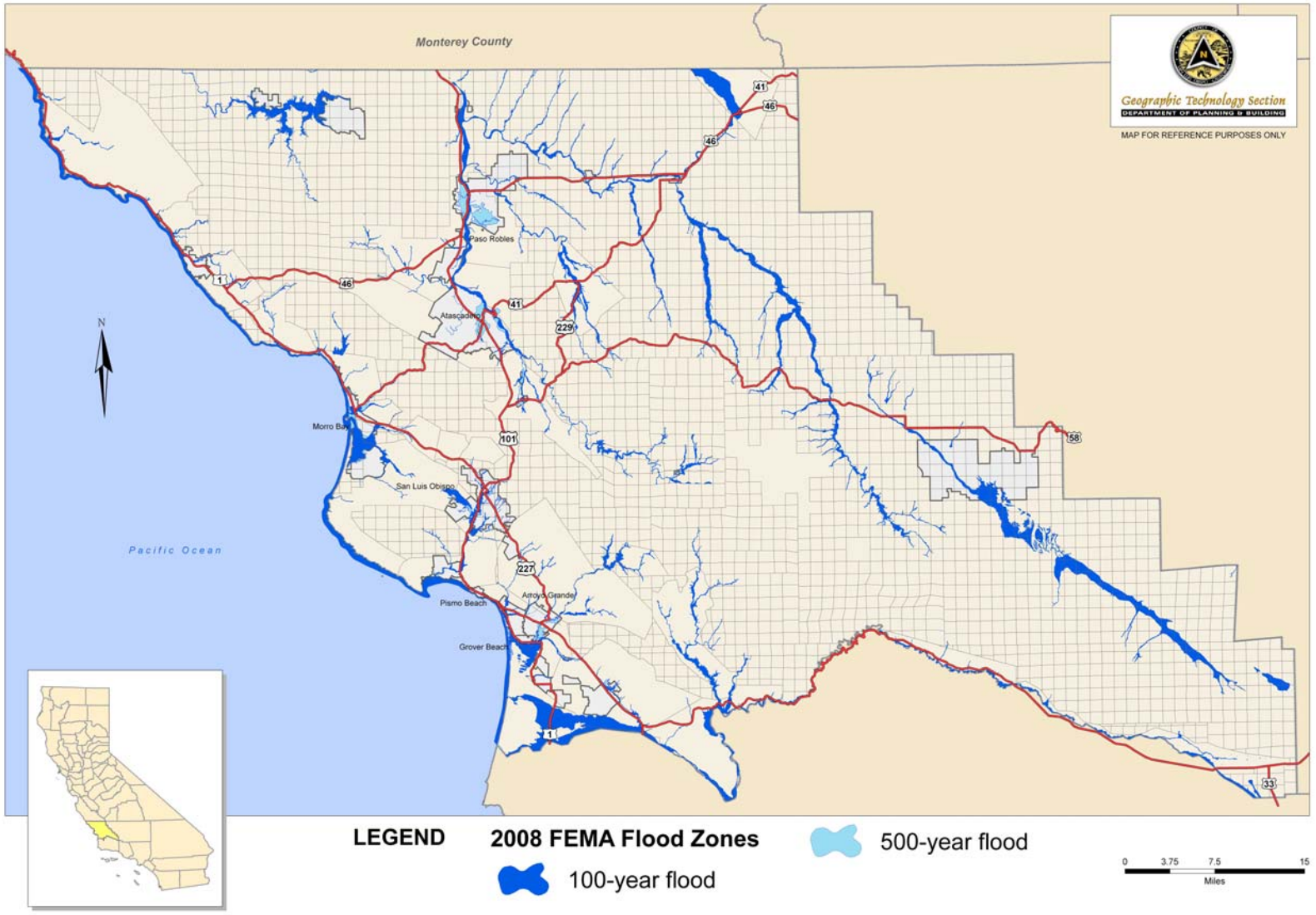
The County's Land Use Ordinance and Coastal Zone Land Use Ordinance (Titles 22 and 23 of the County Code) include standards that require preparation and submittal of drainage plans for new development. These regulations specify when drainage plans are required, the contents of an adequate drainage plan, drainage standards, and the plan review and approval process. The Land Use Ordinances also include development standards for areas that have a Flood Hazard (FH) combining designation (overlay). Areas within the FH combining designation have the

potential to be inundated by a 100-year flood, and are identified in **Table WR-2 FEMA Flood Zones** are depicted on **Figure WR-3.**

TABLE WR-2
FLOOD HAZARD (FH) COMBINING DESIGNATION AREAS

| Planning Area | Site Name |
|---|---|
| Adelaida | Nacimiento River & San Marcos, Las Tablas, Jack, Summit & Dover Canyons, Sheepcamp, Willow, Paso Robles, and Santa Rita Creeks, Morro, Toro, Cayucos, and Villa Creeks and tributaries, Santa Rosa and San Simeon Creeks |
| Estero | Los Osos, Chorro, Morro, Toro, Willow, Old, Cayucos, Little Cayucos, and Villa Creeks and tributaries |
| Huasna-Lopez | Twitchell Reservoir, Huasna River, Huasna Creek, Alamo Creek, Arroyo Grande Creek and tributaries, Cuyama River |
| Las Pilatas | Salinas River, Huer Huero Creek |
| Nacimiento | Nacimiento River And Canyon; Dip, Franklin, Las Tablas, Snake And Town Creeks; and Lake Nacimiento |
| North Coast | Santa Rosa, Perry, San Simeon, Arroyo De La Cruz, and San Carpoforo Creeks |
| Salinas River | Salinas River |
| Salinas River | Santa Margarita Creek, Yerba Buena Creek, Estrella River and Huerhuero Creek |
| San Luis Bay Coastal | San Luis Obispo, See Canyon, Pismo, Upper Arroyo Grande Los Berros Creeks, Oceano Lagoon |
| San Luis Bay Inland | San Luis Obispo, See Canyon, Pismo, Upper Arroyo Grande Los Berros Creeks |
| San Luis Obispo | Flood Hazard Areas |
| Shandon-Carrizo Plains | Estrella River, San Juan Creek, Cammatti Creek, Cholame Creek and Cuyama River |
| South County Coastal | Santa Maria River and Nipomo Creek and its tributaries |
| South County Inland | Santa Maria River, Twitchell Reservoir, and Nipomo Creek and its tributaries |

FIGURE WR-4
FEMA FLOOD ZONES



*Policy WR 6.1 Integrated management*

Pursue an integrated management approach for waterway projects that includes flood management, water quality protection, groundwater recharge, and ecosystem enhancement objectives. (IRWM)

*Policy WR 6.2 Region-wide permitting*

The County should coordinate with applicable state, regional, and local permitting agencies to develop and implement a region-wide permitting program that will provide consistent watershed or regional implementation measures. (IRWM)

◇ ***Implementation Strategy WR 6.2.1 Adopt drainage standards to minimize flooding***

In order to protect development, structures, and ecological processes, adopt additional drainage standards in sub-regions where topography and/or poor soil conditions significantly contribute to or are the primary cause of flooding. (IRWM)

*Policy WR 6.3 Flooding problems*

Distinguish the root cause of flooding problems stemming from new development, existing development, and mandatory regulation. (IRWM)

*Policy WR 6.4 Drainage problems*

Consider drainage problems in the context of an entire watershed. Drainage and flood management plans should address property owner and developer responsibilities. These plans should use an integrated watershed approach that incorporates flood management, water quality, water supply, groundwater, and ecosystem protection and enhancement objectives on a watershed/basin scale. (FC 2 and IRWM)

*Policy WR 6.5 Integrated drainage approach*

Assure that proposed development integrates ecosystem enhancement, drainage control, and natural recharge as applicable.

◇ ***Implementation Strategy WR 6.5.1 Implement LID***

In those areas where percolation is the primary means for flood control, implement low impact design (LID) to enhance

percolation and allow desirable groundwater recharge to increase supply and minimize seawater intrusion. (IRWM)

◇ ***Implementation Strategy WR 6.5.2 Include stormwater management in drainage plans***
Drainage plans will identify measures to detain or retain stormwater as appropriate in order to assist infiltration, including identification of sites for infiltration basins.

**The following Policies WR 6.6 and 6.7 do not apply within the coastal zone, where the Local Coastal Program already includes strict standards regarding alteration of streams.**

*Policy WR 6.6 Stream channelization*
Discourage channelization or major alteration of streams, except where no other alternative is feasible. Minor work in streambeds may be necessary to protect valuable farmland from erosion. (FC3)

*Policy WR 6.7 Relocation of stream courses*
Discourage the relocation of stream courses and encourage the use of levees and/or bypass/overpass channels along the borders of the floodway where flood protection is necessary. When an artificial channel is needed for flood protection, require landscaping and replanting of vegetation adjacent to the channel. (FC6)

*Policy WR 6.8 Areas prone to flooding*
Develop a public information and education program in areas of the county prone to flooding and drainage to inform residents and property owners how to deal with drainage and flood control problems, how to use best management practices, and how to get assistance. (IRWM)

## Summary of Implementation Strategies

For each implementation strategy described in this chapter, the following table (**Table WR-3**) summarizes the County department or other agency that has primary responsibility for carrying out that strategy. In addition, the table summarizes the priority, estimated year of initiation, and potential source of funding of each strategy. The actual timeframe for implementing the strategies is dependent upon the availability of adequate staff and funding.

TABLE WR-3
WATER RESOURCES IMPLEMENTATION

| Implementation Strategies | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS WR 1.1.1 Prepare Water Master Plan | PW, PB | High | 2010 | FCD |
| IS WR 1.2.1 Revise Resource Management System | PB, PW | High | Immediately | DB |
| IS WR 1.4.1 Reclaimed water: monitor technology | RWMG | Medium | 2013 | TBD |
| IS WR 1.4.2 Reclaimed water: identify funding sources | RWMG | Medium | 2011 | TBD |
| IS WR 1.4.3 Reclaimed water: identify partners | RWMG | Medium | 2011 | TBD |
| IS WR 1.4.4 Reclaimed water: groundwater recharge | RWMG | Medium | 2011 | TBD |
| IS WR 1.5.1 Sponsor interagency collaboration | PB, PW, CSDs, cities | Medium | 2010 | TBD |
| IS WR 1.6.1 Evaluate ecosytem water needs | PW | High | 2010 | FCD |
| IS WR 1.7.1 Protect agricultural water supplies | PB | Medium | 2010 | TBD |
| IS WR 1.11.1 Prioritization of resource capacity studies | PB, PW | High | Immediately | FCD |
| IS WR 1.12.1 Water quality data collection | PB, PW, WP | High | Immediately | TBD |
| IS WR 1.12.2 Require water supply assessments | PB, PW | High | Immediately[3] | N/A |

| Implementation Strategies | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS WR 1.14.1 Desalination: monitor technology | WP | High | 2010 | TBD |
| IS WR 1.14.2 Desalination: identify funding | WP | High | 2010 | TBD |
| IS WR 1.14.3 Desalination: identify partners | WP | High | 2010 | TBD |
| IS WR 2.1.1 Groundwater monitoring: secure funding | PW | High | 2010 | FCD, grant |
| IS WR 2.1.2 Consider countywide groundwater ordinance | PW, PB | Medium | 2011 | DB, FCD, grants |
| IS WR 2.1.3 Prepare groundwater management plans | PW, PB | High | 2012 | DB, FCD, grant |
| IS WR 2.2.1 Collaborate for groundwater data collection | PW, PB, EH | High | Immediately | DB, FCD |
| IS WR 2.2.2 Improve well permit data collection | EH, PW | High | 2010 | N/A |
| IS WR 2.2.3 Pursue data collection from all groundwater wells | PW, PB, EH | High | 2010 | DB, FCD |
| IS WR 2.2.4 Groundwater data collection from water purveyors | PB | High | Immediately[3] | N/A |
| IS WR 2.2.5 Groundwater data collection for new development | PB | High | Immediately[3] | N/A |
| IS WR2.3.1 Revise well permit procedures | EH | High | 2012 | N/A |
| IS WR 2.5.1 Evaluate groundwater banking | PW | High | Immediately | FCD, grants |
| IS WR 3.1.1 Support TMDL's | Applicable depts., agencies | High | 2010 | TBD |
| IS WR 3.1.2 Employ pollution prevention in County operations | PW, GS | High | 2010 | PW (Roads TBD) |
| IS WR 3.1.3 Minimize construction-related impacts to water quality | PB, PW, GS | High | Immediately | TBD |
| IS WR 3.1.4 Continue water quality-related public education | PW, PB | High | Immediately | TBD |
| IS WR 3.2.1 Minimize runoff from new development | PB, PW, GS | High | Immediately | DB |
| IS WR 3.3.1 Prioritization and preparation of groundwater management plans | PW, PB, WP | High | Immediately | TBD |
| IS WR 3.3.2 Maintain database of onsite wastewater systems | PB | Medium | 2011 | DB |

| Implementation Strategies | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS WR 3.3.3 Abatement of failing septic systems | PB, EH, RWQCB | High | Immediately | DB |
| IS WR 3.6.1 Protect drinking water sources from grading | PB, PW | High | 2011 | DB |
| IS WR 3.6.2 Abate recreation-related pollution of drinking water sources | EH, GS, PB | High | 2011 | DB, Grants |
| IS WR 3.6.3 Control Quagga mussels and similar invasive species | GS, PW, MCWRA | High | Immediately | TBD |
| IS WR 4.1.1 Identify baseline per capita water use | PB | High | Immediately | DB |
| IS WR 4.1.2 Adopt countywide water conservation ordinance | PB | High | 2010 | DB |
| IS WR 4.1.3 Evaluate a countywide water conservation program | PB, PW, CSDs, cities | High | 2011 | TBD |
| IS WR 4.1.4 Expand public education programs for water conservation | PW | Medium | 2012 | TBD |
| IS WR 4.2.1 Incorporate water pricing into RMS | PB | High | 2010 | DB |
| IS WR 4.3.1 Promote water conservation demonstration projects | PB, GS, Cal Poly | Medium | 2011 | DB, grant |
| IS WR 4.3.2 Assess and monitor County water use | GS | High | 2010 | DB |
| IS WR 4.3.3 Reduce water use in County operations | GS | High | 2010 | DB |
| IS WR 4.3.4 Provide water conservation education for County employees | GS | High | 2010 | DB |
| IS WR 4.4.1 Evaluate impact of self-regenerating water softeners | PB, Wastewater agencies | Medium | 2012 | DB |
| IS WR 4.6.1 Develop and adopt a graywater ordinance and program | PB | Medium | 2010 | DB |
| IS WR 4.7.1 Develop and implement a Low Impact Development (LID) Ordinance | PB, EH, PW | Medium | 2012 | DB |
| IS WR 5.1.1 Support watershed management plans | PW, PB | High | 2011 | DB, Grants |
| IS WR 5.1.2 Secure funding for watershed management | PW, PB | Medium | 2010 | DB |

| Implementation Strategies | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS WR 5.1.3 Promote the coordination of watershed protection efforts | PB, AG, PW | Medium | 2012 | DB |
| IS WR 6.2.1 Adopt drainage standards to minimize flooding | PB, PW | Medium | 2011 | DB |
| IS WR 6.5.1 Implement LID | PB, PW | High | Immediately | N/A |
| IS WR 6.5.2 Include stormwater management in drainage plans | PB, PW | High | Immediately | N/A |

Notes:
1 Department abbreviations:
Cities = Incorporated cities
CSDs = Community Service Districts
EH = County Environmental Health Services Division
FCD = County Flood Control and Water Conservation District
GS = County General Services Agency
MCWRA = Monterey County Water Resources Agency
PB = County Department of Planning and Building
PW = County Department of Public Works
RWQCB = Regional Water Quality Control Board
RWMG = Regional Water Management Group
WP = Water purveyors
2 Funding source abbreviations:
DB = Planning and Building Department Budget
TBD = To be determined
3 Denotes an ongoing activity.
Source: Department of Planning and Building, March 2009.